IN THE CLAIMS

1-5. (Cancelled)

6. (Currently Amended) A solid-state complementary metal-oxide semiconductor type image pickup device, comprising:

a semiconductor substrate having a well region formed thereon; and

a pixel unit comprising a plurality of pixels on the semiconductor substrate, each pixel in the pixel unit including

(a) a photoelectric conversion element formed in said well region for receiving light and producing signal charge in accordance with an amount of the received light;

(b) a readout section formed in said well region for reading out the signal charge produced by said photoelectric conversion element at a predetermined readout timing;

(c) a node connecting the photo electric conversion element through the readout section ; and

(d) voltage control ~~means~~ unit for applying a predetermined substrate bias voltage to said well region upon reading out of the signal charge by said readout section.

7. (Currently Amended) The complementary metal-oxide semiconductor type solid-state image pickup device according to claim 6, wherein said ~~photoelectric conversion element is provided for each of a~~ plurality of pixels ~~formed~~ are arranged in a two-dimensional array on said semiconductor substrate.

8. (Currently Amended) The complementary metal-oxide semiconductor type solid-state image pickup device according to claim 7, wherein said well region is ~~formed~~ electrically ~~integrally~~ integral in a region of said semiconductor substrate which includes all

of said pixels arranged in the two-dimensional array, and a common substrate bias voltage to all of said pixels is applied to the well regions.

9. (Currently Amended) The complementary metal-oxide semiconductor type solid-state image pickup device according to claim 7, wherein said well region is formed in an electrically isolated relationship for each row of said pixels arranged in the two-dimensional array, and an independent substrate bias voltage is applied to the cell regions for each row.

10. (Currently Amended) The complementary metal-oxide semiconductor type solid-state image pickup device according to claim 6, wherein said well region is a p-type well region and the substrate bias voltage is a negative voltage.

11. (Currently Amended) The complementary metal-oxide semiconductor type solid-state image pickup device according to claim 6, wherein said solid-state image pickup device ~~is a complementary metal-oxide semiconductor type solid-state image pickup device which includes a plurality of pixels each of~~ each pixel ~~which~~ also includes ~~said photoelectric conversion element and~~ a pixel transistor for converting the signal charge read out from said photoelectric conversion element into an electric signal and outputting the electric signal to a signal line.

12. (Cancelled) .

13. (Currently Amended) A complementary metal-oxide semiconductor type solid-state image pickup device, comprising:

a semiconductor substrate having a well region formed thereon; and

a pixel unit comprising a plurality of pixels on the semiconductor substrate, each pixel in the pixel unit including

(a) a photoelectric conversion element formed in said well region for receiving light and producing signal charge in accordance with an amount of the received light;

(b) a readout section formed in said well region for reading out the signal charge produced by said photoelectric conversion element at a predetermined readout timing; ~~and~~

(c) a node connecting the photo electric conversion element through the readout section, and

(d) voltage control means for applying a substrate bias voltage to said well region and changing the substrate bias voltage during a storage period of the signal charge by said photoelectric conversion element.

14. (Currently Amended) The complementary metal-oxide semiconductor type solid-state image pickup device according to claim 13, wherein said ~~photoelectric conversion element is provided for each of a~~ plurality of pixels ~~formed~~ are in a two-dimensional array on said semiconductor substrate.

15. (Currently Amended) The complementary metal-oxide semiconductor type solid-state image pickup device according to claim 14, wherein said well region is formed electrically integrally in a region of said semiconductor substrate which includes all of said pixels arranged in the two-dimensional array, and a common substrate bias voltage to all of said pixels is applied to the well regions.

16. (Currently Amended) The complementary metal-oxide semiconductor type solid-state image pickup device according to claim 14, wherein said well region is formed in an electrically isolated relationship for each row of said pixels arranged in the two-dimensional array, and an independent substrate bias voltage is applied to the cell regions for each row.

17. (Currently Amended) The complementary metal-oxide semiconductor type solid-state image pickup device according to claim 13, wherein said well region is a p-type well region and the substrate bias voltage is a negative voltage.

18. (Currently Amended) The complementary metal-oxide semiconductor type solid-state image pickup device according to claim 13, wherein ~~said solid-state image pickup~~

~~device is a complementary metal-oxide semiconductor type solid-state image pickup device which includes a~~ each of said plurality of pixels ~~each of which~~also includes ~~said photoelectric conversion element and~~ a pixel transistor for converting the signal charge read out from said photoelectric conversion element into an electric signal and outputting the electric signal to a signal line.

19. (Cancelled)

20. (Currently Amended) A ~~driving~~ method for driving a solid-state image pickup device comprising

(a) a semiconductor substrate having a well region formed thereon; and

(b) a pixel unit comprising a plurality of pixels on the semiconductor substrate, each pixel in the pixel unit including

(i) a photoelectric conversion element formed in said well region for receiving light and producing signal charge in accordance with an amount of the received light;

(ii) a readout section formed in said well region for reading out the signal charge produced by said photoelectric conversion element at a predetermined readout timing;

(iii) a node connecting the photo electric conversion element through the readout section, and

(iv) voltage control means for applying a substrate bias voltage to said well region and changing the substrate bias voltage during a storage period of the signal charge by said photoelectric conversion element,

~~wherein a photoelectric conversion element for receiving light and producing signal charge in accordance with an amount of the received light and a readout section for reading out the signal charge produced by said photoelectric conversion element at a predetermined readout timing are provided in a well region formed on a semiconductor substrate,~~

said method comprising the steps of:

converting light to a signal charge;

storing said signal charge during a charge storage period; and

~~a step of~~ applying a predetermined substrate bias voltage to said well region upon reading out of the signal charge by said readout section during said readout period.

21. (Currently Amended) The driving method for a complementary metal-oxide semiconductor type solid-state image pickup device according to claim 20, wherein said photoelectric conversion element is provided for each of a plurality of pixels formed in a two-dimensional array on said semiconductor substrate.

22. (Currently Amended) The driving method for complementary metal-oxide semiconductor type a solid-state image pickup device according to claim 21, wherein said well region is formed electrically integrally in a region of said semiconductor substrate which includes all of said pixels arranged in the two-dimensional array, and a common substrate bias voltage to all of said pixels is applied to the well regions.

23. (Currently Amended) The driving method for a complementary metal-oxide semiconductor type solid-state image pickup device according to claim 21, wherein said well region is formed in an electrically isolated relationship for each row of said pixels arranged in the two-dimensional array, and an independent substrate bias voltage is applied to the cell regions for each row.

24. (Currently Amended) The driving method for a complementary metal-oxide semiconductor type solid-state image pickup device according to claim 20, wherein said well region is a p-type well region and the substrate bias voltage is a negative voltage.

25. (Currently Amended) A ~~driving~~ method for driving ~~for~~ a complementary metal-oxide semiconductor type solid-state image pickup device comprising

(a) a semiconductor substrate having a well region formed thereon; and

(b) a pixel unit comprising a plurality of pixels on the semiconductor substrate, each pixel in the pixel unit including

(i) a photoelectric conversion element formed in said well region for receiving light and producing signal charge in accordance with an amount of the received light;

(ii) a readout section formed in said well region for reading out the signal charge produced by said photoelectric conversion element at a predetermined readout timing;

(iii) a node connecting the photo electric conversion element through the readout section, and

(iv) voltage control means for applying a substrate bias voltage to said well region and changing the substrate bias voltage during a storage period of the signal charge by said photoelectric conversion element,

~~wherein a photoelectric conversion element for receiving light and producing signal charge in accordance with an amount of the received light and a readout section for reading out the signal charge produced by said photoelectric conversion element at a predetermined readout timing are provided in a well region formed on a semiconductor substrate, comprising~~

said method comprising the steps of:

converting light to a signal charge,

storing said signal charge during a charge storage period, and

~~a step of~~ applying a substrate bias voltage to said well region and changing the substrate bias voltage during ~~a~~ said storage period of the signal charge by said photoelectric conversion element.

26. (Currently Amended) The driving method for a complementary metal-oxide semiconductor type solid-state image pickup device according to claim 25, wherein said photoelectric conversion element is provided for each of a plurality of pixels formed in a two-dimensional array on said semiconductor substrate.